Saili Manoj Ghavat
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EDUCATIONAL QUALIFICATIONS

Master of Science, Electrical and Electronics Engineering **GPA: 3.83/4.0**
University of North Carolina, Charlotte **Expected: May 2016**
Bachelor of Engineering, Electronics and Telecommunication **DISTINCTION**
Mumbai University, India **June 2013**
Related Courses: Advanced Embedded Systems | Computer Architecture | Real Time Operating Systems | Real Time and Embedded Systems | Multi Processor Systems | Microprocessors and Microcontrollers | Analog and Digital Integrated Circuits | Principles of Control Systems | Introduction to VLSI | Microelectronics |Discrete Time Signal Processing

TECHNICAL SKILLS

Programming Languages: C, C++, Embedded C, Python
Operating Systems: Windows, Linux, Robotic Operating System (ROS)
Software: QEMU emulator, GEM5 simulator, High Performance Embedded Workshop IDE (HEW), MATLAB, Kiel µVision, Proteus Design Suite, MPLAB IDE, Code Composer Studio(CCS)
Protocols: UART, I2C, SPI, Zigbee
Microprocessors and Microcontrollers: Renesas RX63N, TI MSP430, PIC 16F887, Intel 8085, 8086, 8051, Arduino

ACADEMIC PROJECTS

ROS Node Development for LIDAR LITE **Spring 2015**
• Setting up of ROS-Indigo environment on a Linux Ubuntu machine and developing a ROS node for communicating with LIDAR LITE through an Arduino board
• Controlling the motion of LIDAR LITE required to get a 3D map of the environment using Arduino

Digital Watch Prototype Design with Renesas RX63N **Spring 2015**
•The project required to design, build, and program a digital watch using the RX63N's Real Time Clock (RTC) peripheral for accurately keeping track of the time

Programming bare-metal ARM with QEMU **Spring 2015**
• Various projects like use of standard C libraries, booting Linux etc. on bare metal ARM

Performance analysis of ARM processor using GEM 5 simulator **Spring 2015**
• Used matrix multiplication code in C to get familiarized the with gem5 simulator

Automation of Wheel Chair using Encoders **Fall 2014**
• Worked on Encoders and wrote an Arduino Program to automate a wheel chair
• The encoders would help detect the direction as well as the speed of the wheel chair

Parallel Implementation of Ray Tracer for various partitioning schemes in C++ and OpenMPI **Fall 2014**
• Developed a parallel implementation for existing Ray Tracer engine
• These parallel implementations were done on different static and dynamic schemes
• Using these partitioning schemes, a speedup as high as 16x for 64 nodes on a cluster for complicated scenes of 5000x5000 pixel dimensions with low C-to-C ratio(Communication to Computation ratio) was obtained

Parallel Implementation of Compartmental Hodgkin-Huxley Neuron model in C++ and OpenMPI **Fall 2014**
• Developed a parallel version for the existing sequential version (in C), using Open MPI
• The parallel program achieved almost sub linear to linear speedups with increase in number of nodes

Autonomous Vacuum Cleaner Robot **March 2013**
• The vacuum cleaner robot worked in two different modes: Autonomous Mode and Speech Mode
• In autonomous mode, the robot would detect obstacles and navigate through the area
• In speech mode, an android application was used to give instructions to the robot using a mobile device. A Bluetooth module was embedded in the robot to receive the instructions from the mobile

WORK EXPERIENCE

Accord Electro - Technics Pvt. Ltd. - *Intern;* Thane, India **April 2014 - May 2014**
• Assisted with development of scanning head required for calculation of frequency, error calculation with reference to standard frequency and displaying error

Vijigeeshu Embedded Techniques Pvt. Ltd. - *Intern*; Mumbai, India **December 2013 - February 2014**
• Worked in Testing, Production and Quality Checking Departments
• Worked on a project for serial transmission and reception to be used for single wired communication between lift panels

CERTIFICATIONS

Diploma in Embedded Systems - Institute for Design of Electrical Measuring Instruments **August 2014**

LEADERSHIP AND OTHER ACTIVITIES

• Participated and won various Inter-Intra college tech fest events like robo-soccer, robo-maze
• Participated in Vedic Mathematic competition